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February 14, 2014

California Coastal Commission
c/o Sea-Level Rise Work Group
45 Fremont Street, Suite 200
San Francisco, CA 94105

Submitted via e-mail to: SLRGuidanceDocument@coastal.ca.gov

RE: Comments on the Coastal Commission Proposed Draft Sea-Level Rise Policy Guidance

Dear California Coastal Commission Sea Level Rise Work Group:

On behalf of Heal the Bay, a non-profit environmental organization with over 15,000 members dedicated to making the Santa Monica Bay and Southern California coastal waters and watersheds safe and healthy for people and local ecosystems, we are writing to provide comments on the California Coastal Commission (CCC) proposed Draft Sea-Level Rise Policy Guidance (guidance document). We commend the CCC's commitment to providing guidance to local municipalities on ways to plan for sea-level rise and associated adaptation measures. Investing time and resources into identifying and working towards environmentally-sound adaptation solutions is imperative to successfully advance resilient coastal communities in the face of climate change.

The United States Geological Survey's Coastal Vulnerability Index rates most of the Southern California coast as "highly vulnerable" to coastal change due to sea level rise and climate change. Approximately 85% of California's residents live or work along bay or coastal areas and are facing sea-level rise.¹ As higher sea levels, increased storm surges, and inland flooding coincide, projected inundation is likely to impact water supply canals, wastewater treatment plants, power plants, and other critical infrastructure throughout California.² Heal the Bay plays an active role in supporting and encouraging local jurisdictions and state agencies to develop coastal development policies that employ adaptation strategies to sea level rise that protect public safety and the environment.

We urge the Commission to prioritize environmentally-sound, nature-based adaptation strategies, such as wetland, dune, and beach protection, as these habitats will help buffer communities from sea-level rise and storm surges while enhancing coastal resources. The protection and stewardship of our coastal resources are among California's most important long-term responsibilities. We believe that this policy guidance provides an important and timely opportunity to help the CCC meet this responsibility. To that end, we offer the following comments to further refine the draft sea-level rise guidance document.

¹ "Considering sea level rise as a coastal hazard," Proceedings of Coastal Zone '07 Portland, OR, (July 22-26, 2007); California Climate Adaptation Strategy at p. 3.

² California Climate Change Center, "The Impacts of Sea-Level Rise on the California Coast," (May 2009), available at www.pacinst.org/reports/sea_level_rise/report.pdf; CA Climate Adaptation Strategy, p. 65, 68.

II. PRINCIPLES FOR ADDRESSING SEA-LEVEL RISE IN THE COASTAL ZONE

A. Sea-Level Rise Projections

Heal the Bay supports the CCC's commitment to using best available science to develop sea-level rise projections, and encourages the pursuit of refined sea-level rise projection and vulnerability analyses for planning at the local scale. We further recommend that the CCC provide detailed guidance on the minimum attributes to include in these localized sea-level rise vulnerability analyses, including shoreline attributes and slope, storm frequency and magnitude, storm surge projections, sediment transport patterns, fluvial flood frequency and magnitude, shoreline erosion patterns, and changes in local precipitation and runoff patterns. Additionally, we support CCC's proposal to regularly review and update sea-level rise projections based on the best available science, as new information becomes available. We also recommend that local municipalities use a range-based approach when developing refined sea-level rise projections, and apply the precautionary approach when making Local Coastal Program (LCPs) and Coastal Development Permit (CDPs) related decisions.

B. Hazard Zones

Although we are supportive of the direction the CCC intends to take regarding minimizing coastal hazards (pages 24-25), we recommend that the guidance document best strengthened to restrict new development in hazard zones. We also recommend that it incorporate direction to evaluate existing developments in these zones by utilizing risk assessments to gauge the vulnerability of each development to flooding and sea-level rise for its functional lifespan, and that local governments work with high risk development owners to identify the best course of action for these sites to address the sea-level rise related vulnerabilities. We specifically support the emphasis on prioritizing coastally dependent uses (number 7), the "no future seawall" deed restriction in number 8 if new development is allowed in hazard areas.

When planning and locating new development, the guidance document should explicitly state what types of development should not be zoned in areas vulnerable to sea-level rise, for example industrial uses or development that may result in habitat or water quality degradation. Infrastructure that may cause or contribute to surface and subsurface water quality impairments should be disallowed, such as Publicly Owned Treatment Works or Wastewater Treatment Facilities, onsite waste treatment systems or septic systems, and waste disposal and processing facilities, such as dumps. Siting these types of development in areas vulnerable to sea-level rise will create high risk of inundation, which could lead to further water quality impairments; therefore, LCPs should consider this in the planning and designing of these facilities when placed in the coastal zone.

C. Protection of Coastal Resources and Recreation

Heal the Bay support the guidance document's emphasis on maximizing natural shoreline values and processes, while avoiding the perpetuation of shoreline armoring. We further recommend that the guidance document prioritize the implementation of non-structural adaptation strategies that enhance ecosystems' natural adaptive capacity and restrict the use of sea walls and other structural protective barriers where a less environmentally damaging alternative exists. Moreover, the sea-level rise guidance document should include provisions to require the incremental review of sea walls and hardened streambanks, so that they are not conditioned to live in perpetuity. We suggest a potential 15-year review period, as it offers a time certain for permit re-evaluation. We also encourage the integration of a monitoring and mitigation component in the recommended seawall and hardened streambank review, whereby existing armored stretches and adjacent shorelines are monitored, and if



they are found to be causing or contributing to habitat damage or shoreline erosion, the property owner is responsible for mitigation of these impacts. Seawalls and hardened streambanks also often follow a pattern where they are concentrated in certain riparian and coastal stretches. These concentrated areas of hardening may have cumulative erosion and habitat degradation impacts; therefore, we recommend that environmental impacts of armored coastal and stream areas within close proximity of one another be considered cumulatively.

We support the guidance provided in this section to provide maximum protection to public beaches, recreational resources, and natural shorelines. We further recommend that the CCC address critical habitats, such as wetlands and dunes, in this section by including a provision that provides guidance for the identification, protection, and buffering of these important habitats so that they can migrate inland or be restored elsewhere as sea-level rises. Additionally, we recommend that local governments conduct analyses that identify properties inland from these critical natural habitats as potential migration corridors, and proactively plan for habitat migration through a variety of options, such as re-zoning, inland habitat protection, etc.

D. Agency Coordination and Public Participation

Heal the Bay applauds the CCC for including agency coordination in the guidance document, as it is a critical part of successful policy implementation. We are also encouraged to see regional assessments included in this section (page 27, number 16). We recommend that the CCC highlight some specific examples of regional assessments, for example the vulnerability assessments done as a part of Adapt-LA in Los Angeles or Ventura County, to provide local governments sample resources to facilitate this work.

We are hopeful that vulnerability assessments, sea-level rise projections, and climate change related LCP updates are conducted in a consistent manner across local municipalities. Therefore, we urge the CCC to facilitate this process by becoming a clearinghouse for vulnerability assessments, LCP updates, and other Coastal Act climate policies pursued at the local scale. Moreover, we recommend that the CCC work with the local governments that are early adopters in updating their LCPs for sea-level rise, and develop model LCP policies that can be adapted and integrate across the state to help facilitate a consistent approach to coastal climate change adaptation.

We further recommend that the guidance document explicitly direct CCC to provide updates to sister state agencies, such as the State Lands Commission, State Water Resources Control Board, and Department of Fish and Wildlife on sea-level rise related research and planning efforts, to share updated plans and information and pursue consistency in direction across agencies.

III. SEA-LEVEL RISE SCIENCE

A. Best Available Science on Sea-Level Rise

As mentioned above, Heal the Bay recommends that localized vulnerability assessments be conducted to inform planning. These refined studies should incorporate not only the NRC sea-level rise projections, but also the many factors that may affect inundation, erosion, and other sea-level rise impacts (shoreline attributes and slope, storm frequency and magnitude, storm surge projections, sediment transport patterns, fluvial flood frequency and magnitude, shoreline erosion patterns, and changes in local precipitation and runoff patterns). We recommend that the CCC include detailed direction on the



minimum attributes to include in these localized sea-level rise vulnerability analyses in its guidance document.

B. Physical Impacts of Sea-Level Rise

Sediment Impacts and Erosion: The guidance document addresses changes to sediment supply and movement from sea-level rise in the coastal zone (page 31), which we support, but we recommend that it take a more watershed-based approach and consider sediment impacts along the land-sea interface. Currently, the document only identifies sediment loss potential in the coastal zone. Yet, sea-level rise may also increase fluvial erosion rates as more frequent and/or more severe storms occur, thereby increasing sediment supplies in the coastal zone. Sea-level rise is likely to increase erosion rates along coastal areas with oceanfront cliffs; however, it will also likely increase erosion rates along low lying zones as inundation moves inland. We ask that erosion be expanded to address low lying regions as sea-level rise will dramatically alter sedimentation and deposition in these areas. Furthermore, the guidance document should state that physical impacts of sea-level rise (flooding and inundation, erosion, changes in sediment supply and movement, etc.) are likely to occur simultaneously; LCPs need to consider the cumulative impacts of these events.

C. Consequences of Sea-Level Rise for Coastal Resources and Development

Water Quality: The guidance document discusses how sea-level rise will impact water quality in the coastal zone; however, water quality impacts from sea-level rise are not strictly limited to soil inundation, wastewater facilities damage, ground water supplies contamination. These impacts also include public and private infrastructure already constructed to protect water quality. Local municipalities have historically and are currently working to improve coastal water quality regularly through the implementation of stormwater, trash capture, and low impact development projects. Sea-level rise is likely to impact these projects. The guidance document should be updated to include impacts sea-level rise will have on existing water quality protection infrastructure (page 31).

Coastal Habitats: Heal the Bay appreciates the attention given to protection of sensitive buffer habitats, like wetlands, in the guidance document. The document states that “a 1.4 meter increase in sea-level would flood 150 square miles of land immediately adjacent to wetlands, which could become future wetlands if that land remains undeveloped (Heberger et al., 2009),” which is somewhat misleading because it does not indicate whether the land surrounding wetlands is currently developed (page 34). Many wetlands have extensive developed areas in close proximity, especially in Southern California. Therefore, the guidance document paints a more optimistic picture for wetland migration than exists in most places throughout California. We recommend that the CCC provide more context to the amount of available land for wetland migration in California (and particular Southern California, which is extremely wetland-habitat deficient), as it will help elevate the urgency for protection or acquisition of undeveloped land adjacent to existing wetlands.

Additionally, we guidance document’s recognized need for protection of beach, dune, and intertidal habitats because of habitat value and sea-level rise. In particular, dune habitats will greatly help a coastal community’s adaptive capacity for sea-level rise due to their natural buffer capacity. Dune habitats have also suffered significant losses along the coast, and in particular throughout Southern California. We recommend that the CCC prioritize dune and wetland restoration and migration as part of the sea-level rise guidance document, due to the natural buffer potential of these habitats. We further recommend that the guidance document also identify marine protected areas (MPAs) as areas of



important habitat value where protection from development and coastal climate change related impacts should be minimized.

IV. ADDRESSING SEA-LEVEL RISE IN LOCAL COASTAL PROGRAMS

Heal the Bay supports the approach taken by the CCC in the guidance document to outline specific steps for local municipalities for embarking on sea-level rise integration into LCPs. We recommend as a next step that the CCC work to develop some model LCP policies for local governments to adapt and integrate in their sea-level rise planning to foster a consistent approach to climate change adaptation across the state. We also urge the CCC to include additional direction within the steps outlined in this section of the guidance document, as detailed below.

Steps 1 & 2

We recommend that the CCC include specific direction in Steps 1 and 2 for pursuing local vulnerability assessments and sea-level rise projection studies. Specifically, we urge the CCC to include guidance for the minimum parameters to include in NRC sea-level rise projection refinements at the local scale, for example, shoreline attributes and slope, storm frequency and magnitude, storm surge projections, sediment transport patterns, fluvial flood frequency and magnitude, shoreline erosion patterns, and changes in local precipitation and runoff patterns. We also recommend that the guidance document include cost-projections for these assessments, and suggestions about how to fund fine-scale studies. Providing examples of similar studies that have already been conducted, such as Adapt LA, will also help local governments that have not initiated such research understand the scope and outputs, thereby enhancing facilitation of future analyses and assessments.

In addition, under Step 2 (page 40) we suggest adding the following to the list of questions to help identify future hazards and sea-level rise impacts:

- What are the existing sediment regimes and conditions relevant to the planning area?
- What are the projected changes in sediment transport regimes?
- What are the existing land use and habitat types relevant to the planning area?

Also under Step 2 (page 40), we suggest adding the following to the topics to be evaluated for current and future conditions:

- Current and future sedimentation rates.
- Current and future land use/open space and habitat mapping.

Step 3

We suggest breaking up the one bullet that includes natural resources (“wetlands, ESHA, and other coastal habitats and sensitive species”) into several bullets highlighting the main types of habitats, as well as the associated ecological resources (page 43):

- Sandy beach and dune habitats and associated beach species such as beach hoppers, snowy plovers, brodiaea, grunion, etc.
- Rocky intertidal habitats and marine species such as black abalone, owl limpets, sea palm, and red abalone.
- Wetland habitats and sensitive species such as tidewater goby, sensitive migrating bird species, and native plants.



We also recommend adding these coastal development features (page 43):

- Existing and planned shoreline and stream barriers such as sea walls rip rap, hardened banks, and dams.
- Existing and planned bluff stabilization projects.

We suggest giving more guidance on how to assess “Sensitivity”, “Adaptive Capacity”, and “Consequences” (page 44).

- How are these characteristics judged or measured?
- Should they be based on the scientific literature, best professional judgment, or some other technique? Providing as much guidance as possible will help.

We appreciate the inclusion of examples in the guidance documents to ground the recommendations in practical case studies. However, we are concerned that the wetland example is given a “high adaptive capacity” because in the case discussed it is surrounded by open space, which is not necessarily representative California’s wetlands. In Southern California, it is uncommon for a wetland to be surrounded by open space, therefore we are concerned this example gives a false impression that all wetlands have a high adaptive capacity and that habitat migration will be a simple solution. We recommend that the challenges with migration of habitats, like wetlands, be specifically included in the guidance document, along with the opportunities.

Step 4

Heal the Bay supports the approach taken in Section 4.1 of the guidance document that details recommendations for what to include in updated development standards. We are particularly supportive of the direction to limit subdivisions in areas vulnerable to sea-level rise, limit or prohibit hardened shoreline protection, and convert vulnerable areas to open space. In relation to redevelopment, we appreciate the recommendation to limit expansion in hazardous areas, yet we are concerned that the threshold of 50% of more of an existing structure is too high to trigger any significant alterations clause. We recommend a lower trigger for the application of significant alterations.

The guidance document addresses impacts to local water supplies from saltwater intrusion (page 51), yet it fails to mention how better managing our water resources can help mitigate these impacts. By encouraging water recycling and stormwater capture projects in the coastal zone, potable water demand will decrease. This should lead to less stress being placed on local aquifers for potable water which can decrease the degree of saltwater intrusion. The guidance document should include mitigation measures capable of augmenting local water supplies such as regional water recycling programs, low impact development requirements, and green street strategies.

The guidance document addresses hazards to siting and designing wastewater disposal systems in the shoreline and bluff zone (page 53). Wastewater disposal facilities are not the only type of infrastructure vulnerable to sea-level rise. The guidance document needs to go beyond wastewater disposal infrastructure to include all public and private infrastructures vulnerable to sea-level rise over the structure’s life time.

Under Section 4.2 (pages 53 and 54), we support the prioritization of “soft” or “living” shorelines over shoreline “protection” or armoring. We suggest plainly stating that soft or living shorelines are an alternative hard armoring (e.g. sea walls, revetments), and providing some discussion on the greater stability and sustainability of dune restorations that do *not* include hardening or rip rap below the



dunes. Beach armoring is known to increase wave reflection and result in the narrowing of beaches; in addition, “coastal armoring, including seawalls and rock revetments, has been shown to reduce intertidal beach widths through the processes of placement loss, passive erosion, and increased erosion directly seaward of structures.”³ A true living or soft shoreline that does not have a rock revetment as a foundation, but rather a natural dune form, is most ecologically robust and valuable. Leaving a rock revetment under a primary foredune may elevate the long-term risk of erosion, as the dune cannot shift with tides and wave action, which occurs in natural dune habitats. A revetment-based dune would have very different hydrology, affecting the water table and nutrient dynamics, which in turn could impact native vegetation and dune species.⁴ We suggest that the guidance document clearly define natural habitat restoration projects differently from combined revetment/habitat projects, and prioritize natural habitat protection and restoration for sea-level rise adaptation strategies, as these approaches provide critical natural buffer capacity.

We further suggest including marine protected areas (MPAs) as a special area for recreation within Section 4.3. Heal the Bay’s MPA Watch program assesses human use within and outside Los Angeles area MPAs. Since 2011, we found that the most common coastal uses are non-consumptive recreational activities, although some consumptive activities occur. Our MPA Watch data also show that more people are wildlife watching and tidepooling in Palos Verdes’ MPAs, with participation in both activities increasing notably within MPAs, while remaining relatively flat outside of the MPAs.⁵ These trends suggest that our local MPAs have recreational use value, and should be highlighted as such in local planning documents.

Heal the Bay supports the recommended LCP updates in Coastal Habitats Section 4.4 to minimize impacts to coastal habitats, as many coastal habitats also have great capacity to serve as buffers against sea-level rise and coastal climate change impacts. We recommend that local governments work with CCC biologists to identify these sensitive habitats in their mapping efforts, as well as potential habitat migration corridors. We further recommend that the component to “update policies to provide for new and restored coastal habitat” be more explicit – we support the no net loss provision, but believe that communities should pursue a net increase in habitats like wetlands and dunes, that have great potential to enhance sea-level rise adaptive capacity naturally.

Furthermore, we recommend that Section 4.4 include MPAs in the inventory and maps piece and encourage local municipalities to adopt ordinances minimizing impacts to these areas. In addition, MPAs areas should be considered sensitive habitat areas. MPAs sustain biological productivity through the protection of fish and marine invertebrates and their value in protecting the integrity of marine ecosystems, thereby maintaining healthy populations of all marine species. Additionally, we recommend adding potential loss of rare animals and plants to the “Potential impacts coastal habitats” element of Section 4.4 (page 57).

Under Section 4.6 (page 60), it is suggested that LCPs develop strategies to reduce nonpoint source pollution in the coastal zone to protect water quality. These strategies need to be expanded upon to

³ Dugan, J.E., and Hubbard, D.M., 2010, Ecological effects of coastal armoring: A summary of recent results for exposed sandy beaches in southern California, in Shipman, H. et al., eds., 2010, Puget Sound Shorelines and the Impacts of Armoring—Proceedings of a State of the Science Workshop, May 2009: U.S. Geological Survey Scientific Investigations Report 2010-5254, p. 187-194.

⁴ Dugan, J. and Hubbard, D. Ecological Responses to Coastal Armoring on Exposed Sandy Beaches. Shore & Beach Vol. 74, No. 1, Winter 2006, pp. 10-16

⁵ Heal the Bay MPA Watch Annual Data Report 2013: <http://www.healthebay.org/sites/default/files/pdf/HtB-MPA-Watch-2013.pdf>



include point source pollution reduction as well. Point and non-point sources collectively contribute to water quality impairments. Furthermore, we ask the CCC to specify within the guidance document how LCPs can protect water quality in light of sea-level rise. Specific examples and references should be included that highlight green infrastructure projects (low impact development, increase pervious surface, etc.) already implemented to protect water quality in the coastal zone. Working to implement hydromodification controls, runoff reduction, and infiltration projects upstream will also improve water quality in the coastal zone and should be included as examples in the guidance document. Heal the Bay also recommends that a provision be included in this section to restore natural channels in streams and waterways that have been armored or channelized to help reduce sedimentation impacts.

Additionally, the “Update siting and design policies” element of Section 4.6 (page 61) should include onsite waste treatment systems or septic systems. As inundation moves inland, flooding and groundwater daylighting is likely to increase. Septic systems, which rely on leach fields to disperse treated wastewater, will be at risk and are likely to cause surface water quality impairments. To address this risk, the guidance document should explicitly state that septic systems shall not be sited and designed in coastal zones at risk from sea-level rise.

V. ADDRESSING SEA-LEVEL RISE IN COASTAL DEVELOPMENT PERMITS

Many of the provisions within the CDP section of the guidance document mirror the LCP section of the document. As such Heal the Bay’s recommendations for the LCP section of the guidance document also apply to this section, along with the following detailed comment:

Step 3

We suggest adding the following to the steps to identify potential resource impacts associated with the project (page 73):

- Identify species of concern and the habitats they depend on and map these resources in relation to the location of the proposed project.

VI. ADDITIONAL RESEARCH NEEDS

Heal the Bay appreciates the inclusion of an additional research needs section within the guidance document, and we hope that the CCC works with local and state partners to pursue these important projects. Furthermore, we recommend a few additional research areas be added to this list, specifically economic and social vulnerabilities associated with sea-level rise impacts at the local municipal scale. The economic and social impacts associated with sea-level rise, including inundation and erosion, will likely vary by locality according to different physical, community, and development characteristics. Additionally, local municipalities will have to consider the environmental, economic, and social vulnerabilities when making planning and permitting decisions. Therefore, these analyses need to be conducted on a fine enough scale to help individual communities evaluate trade-offs and prepare for sea-level rise. We recommend the CCC look to Adapt LA and the associated Sea Level Rise Vulnerability Study for the City of Los Angeles study as an example of such research.

Additionally, further assessment of best management practices (BMPs) to address sea-level rise impacts is needed. Identifying the BMPs that most effectively adapt to or mitigate sea-level rise impacts and



provide multiple benefits will help local municipalities with implementing their LCPs through permitting decisions.

APPENDIX C: ADAPTATION MEASURES

Heal the Bay appreciates the thorough approach that the CCC has taken in listing a comprehensive set of adaptation measures, site development standards, shoreline management measures, coastal habitat and water quality protection, and additional measures for community level planning in the appendices, as it provides local municipalities with a full suite of options to implement coastal climate change adaptation actions. However, with such a large list of options, it may be difficult for municipalities to decide which options to pursue over others. We recommend that the CCC prioritize these adaptation measures by preference of which will most likely meet multiple goals of the Coastal Act. We understand the challenges with such a prioritization effort, especially with the complexities and site specific nature of the options. Therefore, a potential approach would be for the CCC to create three tiers ranging from most preferred to least preferred adaptation options, which would help provide local municipalities some context in how to pursue their planning efforts.

We also have a few specific recommendations related to some of the options provided:

Coastal Habitats: “Facilitation of wetland migration” As discussed above, we are concerned that many of California’s wetlands are surrounded by development, making a habitat migration corridor or open space land use designation a significant challenge (page 157). In addition to facilitating wetland migration, we recommend that habitat restoration be included as an adaption option for natural resources, and that it include the suite of natural buffer habitats – dunes, beaches, and wetlands.

Water Quality/Water Supply Management: Table 20 (pages 158-159) does not list all management measures identified in the document and should be expanded. All measures relating to water quality and water supply management need to be included in the table as well as those mentioned above. This would include, but not limited to, the addition of specific zoning requirements for public and private infrastructure in at risk zones, prohibition of certain facilities (i.e. septic systems) impacting water quality when inundated, stormwater infiltration projects contributing to groundwater recharge, saltwater intrusion mitigation, water recycling, green infrastructure capable of mitigating sea-level rise, etc. It is important that Table 20 be expanded to incorporate recommendations from throughout the document.

ADDITIONAL COMMENTS

Mitigation

Heal the Bay recommends that the CCC include a mitigation section in the sea-level rise policy guidance document that provides further direction on when and how mitigation should be required for unavoidable sea-level rise related impacts to Coastal Act resources. Mitigation is mentioned several times throughout the draft guidance document, both through in-kind and fee-based approaches. Clear direction on how to pursue mitigation for impacts that may stem from development and actions in projected sea-level rise hazard zones is needed to ensure a sufficient and consistent approach is pursued statewide. As such, we recommend that the CCC determine the mitigation ratio(s) for various impacts for situations that may trigger in-kind mitigation, as well as establish a well-defined approach to



calculating mitigation fees. When mitigation fee calculations are pursued, we recommend that they account for all damages, including those to ecosystem services, which are particularly important for buffering against sea-level rise and associated coastal impacts.

Incorporate Guidance to Help Safeguard Marine Protected Areas

The CCC's development of sea-level rise guidance presents an opportunity to incorporate policy guidance to address projects that may impact marine life or habitat in California's new network of marine protected areas (MPAs), and other special marine areas, through CCC programs and decisions. The CCC's Strategic Plan for 2013-2018 acknowledges the need for the Commission to develop updated policy guidance to address projects that may impact marine life or habitat in California's new network of MPAs. Development of guidance will help integrate the purposes and benefits of MPAs into the decision making process, fit MPAs into the context of Commission goals and its practices regarding other special areas, and make decisions more efficient and consistent. In short, MPA guidance will help realize the full potential of the MPA network and better meet the CCC's mandate to safeguard coast and ocean resources.

Specifically, Heal the Bay recommends the CCC include language in the sea-level rise guidance document to identify MPAs, and other marine areas with protective designations, as sensitive areas meriting special protection under the Coastal Act. Section 30230 states that "[s]pecial protection should be given to areas and species of special biological or economic significance." A finding that MPAs are areas of special biological or economic significance reflects the strong overlap between Section 30230 and the goals of the MLPA to protect rare habitats, natural diversity of marine life and the integrity of marine ecosystems. Section 30230 goes on to state that "[u]ses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms...." The guidance could provide further justification for protecting MPAs by emphasizing their importance in sustaining biological productivity through the protection of large prolific fish and their value in protecting the integrity of marine ecosystems, thereby maintaining healthy populations of all marine species. To that end, the Marine Life Protection Act design process put a premium on siting MPAs in productive "hot spots" that encompass a rich diversity of habitats.

In the long-term, we urge the CCC to establish criteria that must be met when considering projects that could have adverse impacts on MPAs and other sensitive marine areas. These components could also be integrated into guidance to local governments LCP updates. Specifically, we recommend that MPA guidance identify information that a project proponent must include or reference in a permit application in order for the application to be considered complete. For example, the application should include information on the location and purpose of MPAs and other special marine areas that could be affected by a proposed project. We look forward to working with the CCC and its staff to craft and implement MPA guidance.

We greatly appreciate CCC staff for developing this draft sea-level rise policy guidance and for the opportunity to provide input on this important document. This policy will be a driver for sea-level rise and coastal climate change adaptation planning throughout California. As an agency leading the way on climate change preparedness for the state, we encourage the CCC to ensure that it protect and provide stewardship over California's coastal resources comprehensively, while balancing community needs at



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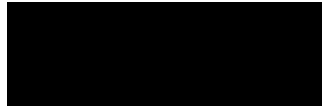
the local scale. We applaud your leadership on this important issue, and look forward to continued work with your agency.

Please contact us if you have any questions regarding our comments.

Sincerely,



Sarah Abramson Sikich, MESM
Coastal Resources Director



Dana Roeber Murray, MESM
Marine & Coastal Scientist